

ALEXANDER MENZIES

3500 Greystone Drive, Apt. 168
Austin, TX 78731

(512) 569-5151
malex@cs.utexas.edu

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- Professional Profile** Interested in research and science based computing applications. Excellent Java and Object Oriented Programming skills. Familiar with many problem solving and search algorithms. Experienced in the design and construction of scientific instruments.
- Education** Bachelor of Sciences, Computer Science *Expected Spring 2007*
The University of Texas at Austin GPA: 3.77
- Skills** *Languages:* Java, C++, LabView, PHP, JavaScript, HTML, SVG, SQL, TCL
Operating Systems: Windows 95/98/ME/2K/XP/NT, Linux, UNIX, DOS
- Projects**
- Designed, drafted, machined, and programmed a grating spectrometer capable of measuring the wavelength of a Helium-Neon laser within 1nm
 - Proven various languages to be *regular, context-free, decidable, semi-decidable*, and *not semi-decidable*
 - Utilized *Most Constrained Variable* and *Least Restrictive Value* heuristics to solve constraint satisfaction problems such as *Alphametrics* and the *N Queens Problem in Java*
 - Wrote program to play Tic-Tac-Toe perfectly against itself using a *tree search algorithm* with *alpha beta pruning* in *Java*
 - Programmed 3D geographical simulation of the Wasatch Front in C++ with *OpenGL*
- Experience**
- Software Engineer** *May 2006 - Present*
IBM, Austin
- Assisted in incorporating *SVG* support into *Mozilla Firefox*
 - Optimized image filters, debugged existing code, and implemented new features
- Sr. Student Associate** *September 2005 - May 2006*
Applied Research Laboratories, University of Texas at Austin
- Ported existing data display applications into the *Project Looking Glass* 3D windowing environment
 - Implemented 3D display applications using *Java3D*
- Undergraduate Research Assistant** *August 2005 - December 2005*
Professor Dan Jaffe, University of Texas at Austin
- Programmed motor and sensor controller software in *LabView* for an infrared spectrometer
 - Assisted in installing the instrument at the *NASA Infrared Telescope Facility* in Hawaii
- Resident Assistant** *August 2003 - May 2005*
Division of Housing and Food Service, University of Texas at Austin
- Monitored welfare of 50 first year male college students
 - Mediated disputes among residents and enforced policies
 - Tutored residents in Computer Science, Physics, and Calculus
 - Organized community building programs and fostered diversity
- Courses**
- Honors Operating Systems
 - Artificial Intelligence
 - Astronomical Instrumentation
 - Algorithms and Data Structures
 - Automata Theory
 - Autonomous Multiagent Systems

Interview Summary Notes

Candidate Name:	Alexander Menzies	Date of Interview:	10/3/06	
Phone Number:	512-569-5151	School Name:	UT Austin	
Program (check all that apply):	<input checked="" type="checkbox"/> ECH <input type="checkbox"/> APT <input type="checkbox"/> COOP <input type="checkbox"/> SUM	Highest Degree/Major:	BS	Computer Science
Are you legally authorized to work in the United States?	Yes	GPA/Graduation Date:	3.77	Spring 2007

Interview Summary

Technical Skills:	Many programming skills - JAVA, C++, Labview. Learned more on optics through work on spectrometer project.
Job Experience/Internships:	Currently working at IBM as a software engineering co-op. He optimized image filters which were previously running slowly, so he did an order n algorithm to increase efficiency. Also, debugging code, mostly in C++. The biggest challenge is that most of the code is undocumented. He also implemented some new features and his code was presented online to others.
School Projects:	<p>As part of his Astronomical Instrumentation class (his favorite course) the team designed a spectrometer measuring a laser wavelength within 1nm. It was a 5 person team comprised of different backgrounds, EE, Astronomy, CS, etc. He was mainly responsible for programming. He programmed all the software using Labview and used JAVA to render a graph in Excel showing the wavelength peaks. If redesigned, thought maybe it would be better to mount differently (horizontally), change the electronics detector (didn't work as well), and remove one collimator (unnecessary).</p> <p>With other projects, used paraprogramming approach which he really enjoyed - the communication, involvement, catching small errors.</p>
Interpersonal Skills/Team Work Leadership skills:	Great communicator; talks in depth about his involvement in his projects and work. Very engineer-like, pulls out a piece of paper and starts drawing diagrams and designs during his explanations. Takes initiative on his assignments. Enjoys the team environment.
Career Interests/Goals:	<p>Strong interest in the research/science side of software engineering. Likes being involved in the design process on projects.</p> <p>Grad school is on the horizon for him; maybe a little bit in the future.</p>
Additional Comments:	Attended information session and even answered our JPL trivia questions. Has a security clearance. Available Oct/Nov 2007; doing a 4000 mile bike trip next summer.

Next Step

Status (check one):	<input checked="" type="checkbox"/> On-Lab Interview:	<input type="checkbox"/> Interest List:	<input type="checkbox"/> No Interest:	Available Times for Interview							
Route to Division: (check all that apply)	1X <input type="checkbox"/>	2X <input type="checkbox"/>	31X <input checked="" type="checkbox"/>	32X <input type="checkbox"/>	33X <input type="checkbox"/>	34X <input type="checkbox"/>	35X <input type="checkbox"/>	37X <input type="checkbox"/>	38X <input type="checkbox"/>	4X <input type="checkbox"/>	5X <input type="checkbox"/>
Route to Manager(s):	Name				Section	316, 317					
	Name				Section						
Technical Interviewer:					Ext.:			Section/Org:			
HR Team Leader:	Teresa Beaudine				Ext.:	4-0627		Section/Org:	115		